

CLAIMS:

1. A photolithographic process comprising the steps of:
- applying a photoresist layer (2), with a substantially uniform thickness, on a substrate (1),
 - locally exposing the photoresist layer (2) to a radiation source with a suitable wavelength,
 - providing a suitable liquid developer composition on the substrate (1),
 - dissolving an exposed or unexposed region of the photoresist layer (2) with the developer composition,
 - rinsing and drying the photoresist layer (2) thereby interrupting said dissolving step,
- wherein the substrate (1) has a metallic surface (1c) in contact with the photoresist layer (2) and the photoresist layer (2) has a thickness $d_r < 100\text{nm}$.
2. A photolithographic process as claimed in claim 1, wherein the substrate comprises a metallic surface layer (1b), with a thickness d_m larger than approximately 10nm, and a further substrate material (1a).
3. A photolithographic process as claimed in claim 1 or 2, wherein the metallic surface (1c) comprises the chemical elements Ni, Cr or Au.
4. A photolithographic process as claimed in any one of claims 1 - 3, wherein the photoresist (2) is a positive novolac resin-based photoresist.
5. A photolithographic process as claimed in any one of claims 1 - 4, wherein the substrate (1a, 1b) is a master substrate for the production of a high density optical medium.
6. A stamper (3) for the production of optical data storage media, manufactured by using the master substrate as used in claim 5.

7. Use of a stamper (3) as claimed in claim 6 for the manufacture of a high density optical data storage medium.

8. An optical data storage medium produced in an injection molding process by
5 using the stamper (3) of claim 6.